

APPENDIX D-6:
Summary of Simulated Effects of Salmon Creek
Streamflows on Okanogan River Streamflow
Based on Water Year Type for All Alternatives

Appendix D-6. Summary of Simulated Effects of Salmon Creek Streamflows on Okanogan River Streamflow Based on Water Year Type for All Alternatives

	Water Year Type				
	Wet	Above normal	Normal	Below normal	Dry
HISTORIC CONDITION					
Salmon Creek flow at mouth (acre-feet/year)					
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)					
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.24%	0.20%	0.19%	0.12%	0.11%
% of Okanogan River pumped at Shellrock					
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
ALTERNATIVE 1 - NEW 80 CFS PUMP ON THE OKANOGAN RIVER					
1a - Steelhead only, no channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	24,371	16,078	13,534	9,361	6,254
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,185	2,522,294	2,167,439	1,821,502	1,241,765
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.60%	0.57%	0.61%	0.55%	0.69%
% of Okanogan River pumped at Shellrock	0.45%	0.68%	0.92%	1.09%	2.13%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.5
1b - Steelhead and Chinook, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	23,751	15,056	13,264	9,260	6,477
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,291,711	2,521,366	2,167,791	1,822,064	1,242,976
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.58%	0.53%	0.57%	0.54%	0.66%
% of Okanogan River pumped at Shellrock	0.42%	0.63%	0.82%	0.96%	1.82%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.5
1c - Steelhead only, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	24,195	15,763	13,345	9,287	6,214
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,234	2,522,214	2,167,508	1,821,566	1,241,945
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.60%	0.57%	0.61%	0.55%	0.67%
% of Okanogan River pumped at Shellrock	0.44%	0.67%	0.89%	1.05%	2.04%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.5

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	Water Year Type				
	Wet	Above normal	Normal	Below normal	Dry
ALTERNATIVE 2 - UPGRADE SHELLROCK TO 35 CFS					
2a - Steelhead only, no channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	22,674	13,892	12,082	8,120	5,613
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,119	2,521,895	2,168,436	1,823,088	1,244,444
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.54%	0.47%	0.50%	0.45%	0.52%
% of Okanogan River pumped at Shellrock	0.33%	0.49%	0.64%	0.76%	1.44%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
2b - Steelhead and Chinook, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	23,232	14,755	13,040	9,049	6,575
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,253	2,522,323	2,169,226	1,823,753	1,245,336
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.57%	0.54%	0.58%	0.56%	0.72%
% of Okanogan River pumped at Shellrock	0.34%	0.51%	0.65%	0.77%	1.49%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
2c - Steelhead only, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	22,651	14,004	12,141	8,134	5,619
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,061	2,522,025	2,168,392	1,823,075	1,244,485
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.54%	0.49%	0.52%	0.46%	0.54%
% of Okanogan River pumped at Shellrock	0.33%	0.49%	0.64%	0.76%	1.44%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4

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	Wet	Above normal	Normal	Below normal	Dry
ALTERNATIVE 3 - 5100 AF WATER RIGHTS PURCHASE					
3a - Steelhead only, no channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	24,538	15,551	13,551	9,184	6,002
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,295,955	2,525,937	2,172,243	1,826,748	1,247,939
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.57%	0.51%	0.54%	0.49%	0.55%
% of Okanogan River pumped at Shellrock	0.21%	0.33%	0.44%	0.52%	1.01%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
3b - Steelhead and Chinook, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	25,083	16,378	14,786	10,392	7,574
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,295,914	2,526,143	2,173,202	1,827,577	1,249,347
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.62%	0.60%	0.68%	0.65%	0.89%
% of Okanogan River pumped at Shellrock	0.24%	0.36%	0.46%	0.54%	1.03%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
3c - Steelhead only, channel rehabilitation					
Salmon Creek flow at mouth (acre-feet/year)	24,545	15,557	13,559	9,185	6,005
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,295,953	2,525,935	2,172,241	1,826,747	1,247,939
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.58%	0.52%	0.56%	0.50%	0.57%
% of Okanogan River pumped at Shellrock	0.21%	0.33%	0.44%	0.52%	1.01%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4
ALTERNATIVE 4 - NO ACTION					
Salmon Creek flow at mouth (acre-feet/year)	18,309	9,907	8,300	3,909	1,277
Okanogan River flow from Salmon Creek to Malott (acre-feet/year)	3,292,403	2,522,350	2,170,385	1,824,185	1,243,925
Salmon Creek inflow at mouth as a % of Okanogan River flow	0.25%	0.21%	0.19%	0.13%	0.09%
% of Okanogan River pumped at Shellrock	0.01%	0.10%	0.06%	0.21%	0.83%
Average # of months/year Okanogan River WAC instream requirements not met	0.4	0.3	1.2	1.4	6.4